Moab Project *Environmental Impact Statement* (EIS) Scoping Meeting

U.S. Department of Energy
Grand Junction Office
(DOE–GJO)

EIS Meeting Agenda

- Introduction
- Background
- Regulatory Framework
- General Information
- Ground Water
- Reclamation Alternatives
- Vicinity Properties
- Process for Input
- Comments and Questions and Answers

What Is NEPA and Why Is DOE Conducting This Meeting?

- NEPA is an acronym for
  National Environmental Policy Act
- NEPA requires assessment of potential environmental impacts of federal agency actions
- Implementing NEPA, for major actions, requires preparation of an *Environmental Impact Statement* (EIS)

What Is NEPA and Why Is DOE Conducting This Meeting? (continued)

- NEPA requires public comments for EIS
  - Public scoping period starts with publication of Notice of Intent in the *Federal Register*
  - Public scoping meetings held to provide opportunity for public to ask questions, discuss concerns, and present comments
  - After Draft EIS is prepared, another public comment period is conducted
- Cooperating Agencies
  - Any federal, state, tribe, or local government agency that has jurisdiction by law and special expertise can be a Cooperating Agency

Moab Remediation Decision Making

- Decision made by DOE Assistant Secretary for Environmental Management
- Decision basis
  - EIS provides environmental consequences
  - Cost and schedule analyses
  - Other (e.g., Congressional directives)
- Record of Decision will identify selected remediation alternative and basis for the decision

Preliminary Schedule of Moab EIS Process

- Publish Notice of Intent: December 20, 2002
- Conduct Public Scoping Meetings: January 21 through January 28, 2003
- Public Scoping Comment Period: December 20, 2002, through **February 14, 2003**
- Publish Draft EIS: January 2004
- Draft EIS Public Comment Period 45 days beginning in January 2004
- Publish Final EIS: August 2004
- Issue Record of Decision: September 2004

Moab EIS

- Scope of Moab EIS
  - EIS will assess potential environmental impacts of actions in remediating tailings, ground water, and contaminated soils at the Moab Uranium Mill Tailings Site (Moab Project Site) and vicinity properties
  - Considerations will include
    - Meteorology, air quality, and visibility
    - Geology, soils, and seismicity
    - Land use
    - Ground water and surface water
    - Ecology
    - Socioeconomic, cultural, and aesthetic resources

Moab EIS

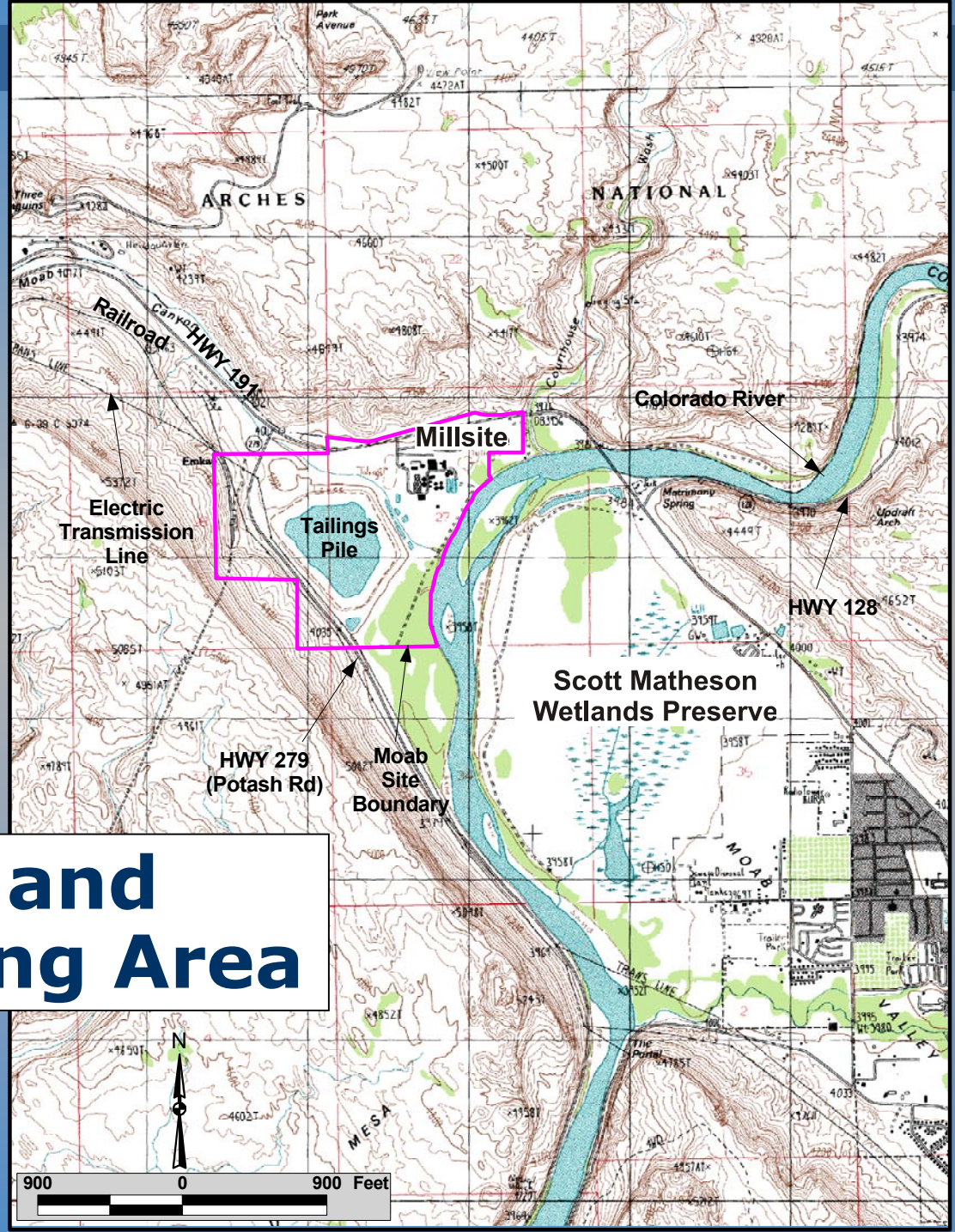
- Scope of Moab EIS (continued)
  - Remediation alternatives
    - No action
    - Cap in place
    - Specific off-site alternatives
  - Site-specific long-term ground water compliance strategies
  - Vicinity property mitigation
  - Transportation modes to be considered
    - Truck haul
    - Rail haul
    - Slurry pipeline

Moab EIS (continued)

- Incorporate information and responses to National Academy of Sciences on *Draft Plan for Remediation* (no *Final Plan for Remediation* will be published)
- Use applicable information from U.S. Nuclear Regulatory Commission (NRC) EIS (prepared for purpose of responding to a license amendment request to cap in place)
- Use *Baseline Risk Assessment*, *Site Observational Work Plan*, and *Characterization of Disposal Site Alternatives* as supporting documents for in-depth information

Moab Site and Surrounding Area

Note: topographic map 10/2001



History

- Uranium Reduction Company began operations in 1956
- Atlas Minerals Corporation acquired and operated site 1962–1984
- Uranium mill tailings disposed of in tailings impoundment on site up to 1984
- Interim cover placed on tailings pile in 1995
- Tailings pile contains about 11.9 million tons of tailings and covers 130 acres next to Colorado River; entire site encompasses 400 acres
- Atlas requested a license amendment to close site and leave tailings on site from NRC in 1996

History (continued)

- Atlas filed for bankruptcy in 1998; NRC created a trust for site reclamation and closure; PricewaterhouseCoopers (PwC) named trustee
- NRC EIS (1999) resulted in decision to amend license permitting cap-in-place recommendation
- U.S. Fish and Wildlife Service (USF&WS) issued *Biological Opinion* that ammonia leaching into ground water is adversely affecting endangered species (fish) in Colorado River

Floyd D. Spence National Defense Authorization Act (Public Law 106–398)

- NRC license terminated on October 30, 2001
- Ownership of former Atlas millsite transferred to DOE
- DOE prepared remediation plan for submittal to National Academy of Sciences (NAS); NAS was to evaluate DOE *Draft Plan for Remediation* cost, risks, and benefits (completed October 25, 2001)
- Former Atlas millsite designated a Title I Site as defined by Uranium Mill Tailings Radiation Control Act (UMTRCA); DOE has responsibility to perform remedial action

UMTRCA

- EPA to set standards for cleanup (40 CFR 192)
  - Established design standards for disposal cells
  - Requires cleanup of land and buildings
  - Requires cleanup of ground water
  - Application of supplemental standards if certain circumstances exist for cleanup of soil, buildings, and ground water
- NRC concurs with remedy and compliance strategies
- DOE conducts remedial action and long-term stewardship

National Academy of Sciences

- National Academy of Sciences (NAS) provided comments to DOE on the *Draft Plan for Remediation* in June 2002 regarding DOE's remediation decision-making process and related technical issues
- NAS concluded that DOE did not have an adequate technical basis to make a remedial action decision and recommended additional, limited, focused technical studies
- NAS issues will be addressed in the Moab Project EIS and supporting technical documentation

Section 7, Endangered Species Act – Consultation With USF&WS

- DOE has been in "informal consultation" with USF&WS since DOE became owner of the Moab millsite (October 2001)
- DOE has coordinated, and USF&WS has concurred with, ongoing activities at Moab millsite
  - Site and cell maintenance activities
  - Continued site characterization; air and ground water monitoring
  - Initial ground water action

Section 7 (continued)

- DOE will continue to coordinate with USF&WS on additional tasks being performed while the EIS is being prepared
  - Interim ground water action
  - Highway 191 remediation (DOE property only)
  - Possible characterization of off-site remedial action alternatives
- DOE will prepare a *Biological Assessment* for remedial action concurrent with preparation of EIS; USF&WS will prepare a *Biological Opinion*
  - The Assessment will evaluate impacts to endangered species and habitat
  - The Opinion addresses whether USF&WS feels the action will jeopardize the existence of endangered species and habitat

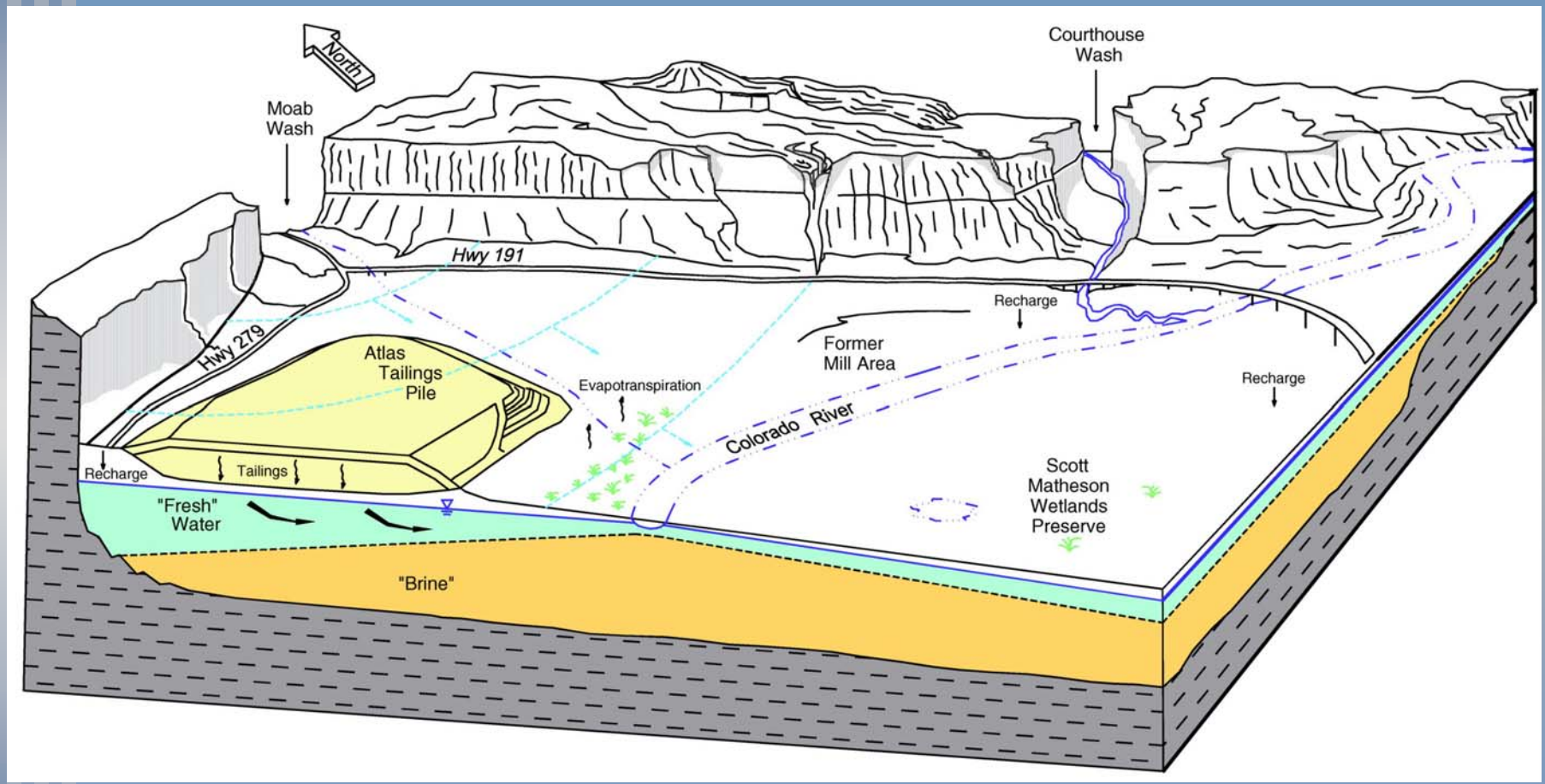
Objectives

- Compliance with ground water quality standards (EPA regulation at 40 CFR 192)
  - Protective of human health and environment (40 CFR 192)
  - State surface water and ground water standards are "to be considered"
  - Compliance with standards will follow process in *Uranium Mill Tailings Remedial Action Ground Water Project Programmatic Environmental Impact Statement*

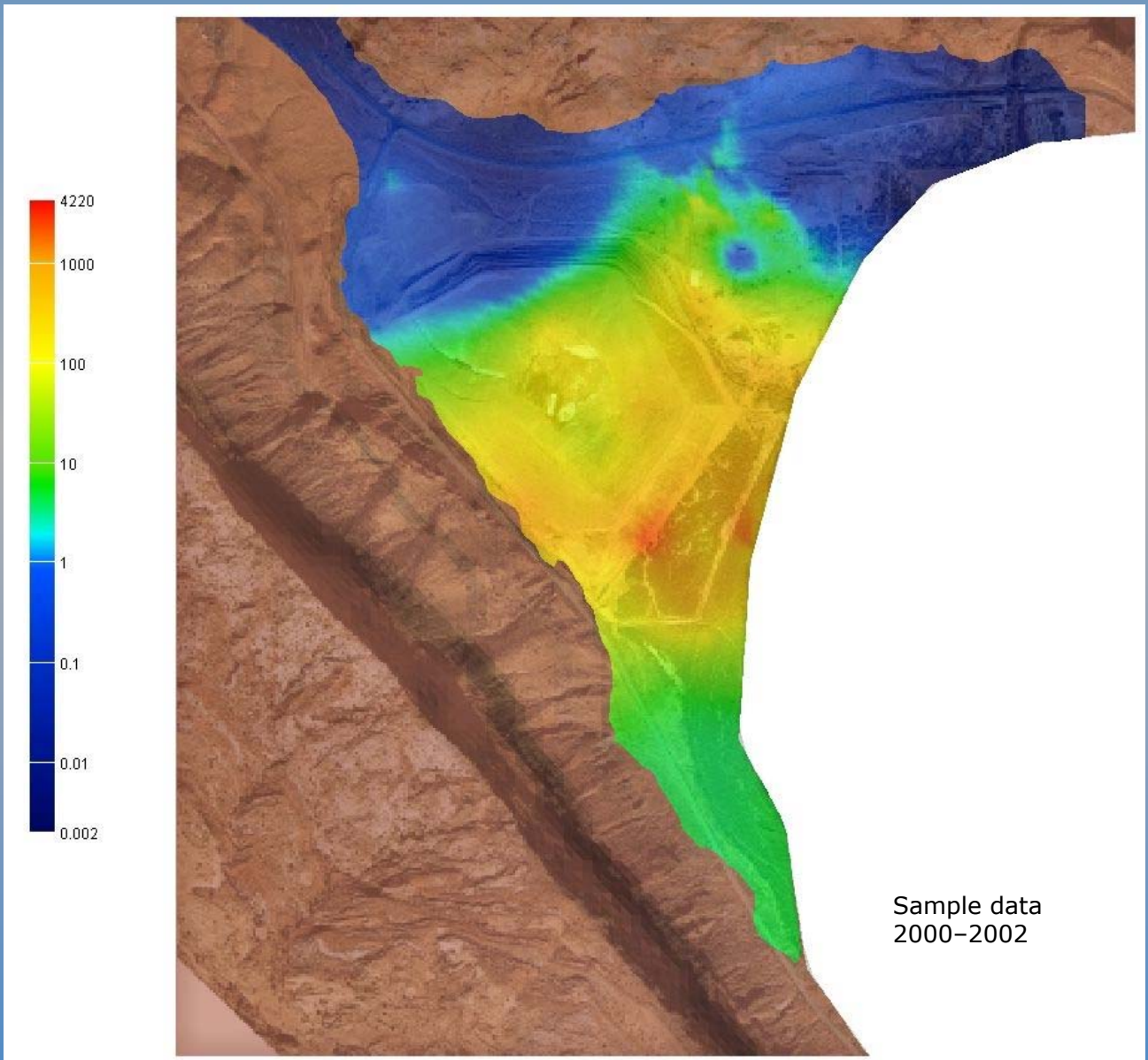
Compliance Strategy Selection Process: *Programmatic Environmental Impact Statement* (PEIS)

- No further remedial action
- Natural flushing with monitoring and institutional controls
- Active engineered treatment
- Some combination depending on contaminant

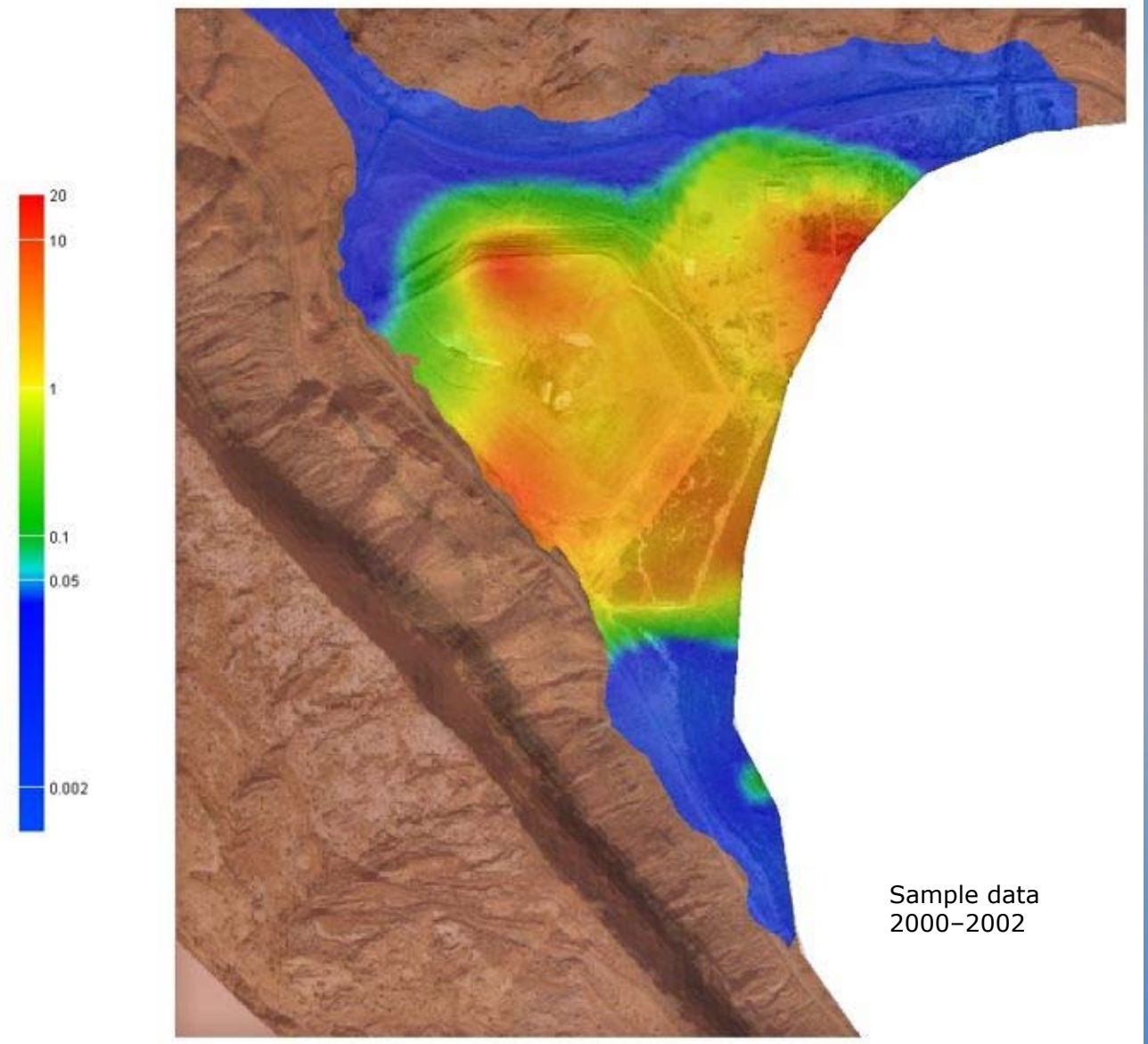
Conceptual Model



Conceptual Ammonia Plume (mg/L)



Conceptual Uranium Plume (mg/L)



Sample data
2000–2002

No Action Alternative

- NEPA requires a No Action Alternative to be considered

On-Site Conceptual Approach

- Place contaminated materials in existing tailings pile
  - Contaminated site soils
  - Contaminated building materials
  - Contamination exceeding standard from potential vicinity properties

On-Site Conceptual Approach (continued)

- Install cover that meets requirements of UMTRCA
  - Stabilizes materials for minimum design life of 200 to 1,000 years
  - Limits radon emissions to standards
  - Limits infiltration of water from rainfall or flooding
  - Protects against erosion

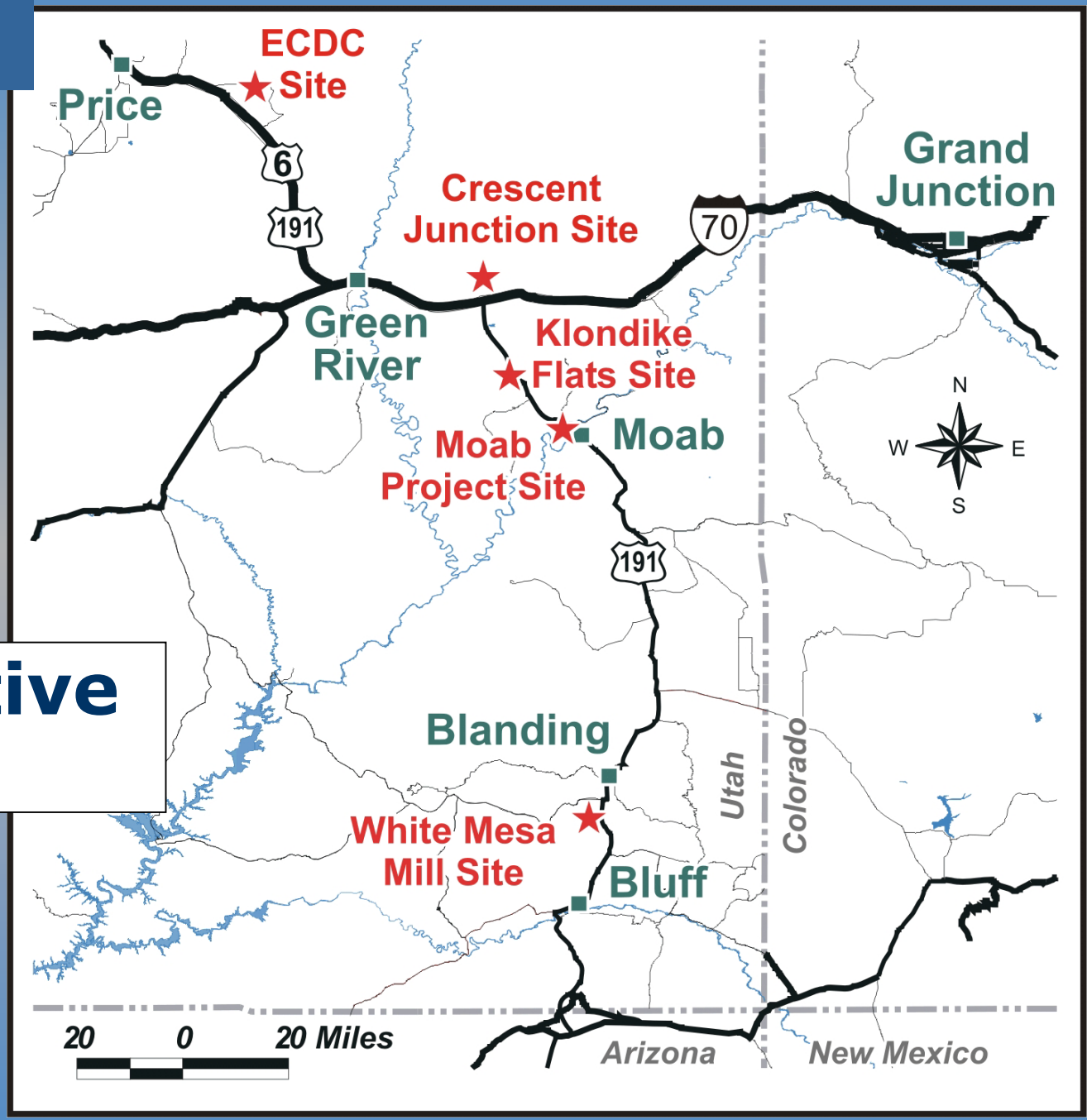
Alternative Disposal Cell Site Considerations

- Favorable hydrogeologic characteristics (i.e., Mancos Shale, setting)
- 200 acres minimum
- Close to transportation routes
- Cell design must meet NRC and EPA standards
- Consider co-locating Moab waste in lieu of creating new site

Off-Site Alternatives

- Reasonable alternative sites considered
  - Klondike Flats
  - Crescent Junction
  - White Mesa Mill
  - East Carbon Development Corporation site
- Several other alternative sites and treatment technologies were considered and not proposed as reasonable alternatives

Alternative Sites



Klondike Flats

- 17 miles north of Moab, west of Canyonlands Field Airport, and south of county landfill
- Situated on land administered by Bureau of Land Management (BLM), interspersed with Utah State School Lands
- Undeveloped land with some grazing; low potential for mineral resources
- Low-lying plateau; desert terrain
- Mancos Shale varies from 400 to 1,200 feet
- Cell to be constructed and owned by DOE

Crescent Junction

- 28 miles north of Moab, 30 miles east of Green River, and north of I–70
- Situated on land administered by BLM, interspersed with Utah State School Lands
- Undeveloped land
- Adjacent to Bookcliffs; desert terrain
- Thick Mancos Shale
- Cell to be constructed and owned by DOE

White Mesa Mill

- 85 miles south of Moab and 6 miles south of Blanding
- Owned by International Uranium Corporation
- Existing NRC-licensed uranium mill with on-site lined ponds
- Requires license amendment
- Potential for recycling/extracting remaining minerals

East Carbon Development Corporation (ECDC) Site

- 100 miles northwest of Moab and west of East Carbon
- Owned by ECDC, an Allied Waste Management company
- Licensed by State of Utah to receive solid wastes and some industrial wastes
- Requires NRC license

Potential Transportation Modes To Be Used

- Trucking
  - Over highway, double trailer units
  - Covered or protective sprayed for dust control
  - Overpass and/or turn lanes for entering or exiting site
- Railroad
  - Existing tracks to be used
  - Spur extensions to some locations
  - Covered or protective sprayed for dust control

Potential Transportation Modes To Be Used (continued)

- Slurry line
  - No existing lines; co-locate in existing corridors
  - New lines to all alternative sites
  - Use two parallel, buried steel lines (recycle water)
  - Pumping stations required along route
  - Some trucking would be required

Transportation Modes Eliminated After Consideration

- Conveyor belt for entire distance
- Off-highway trucks on new haul road
- Off-highway trucks on existing railroad bed

Transportation Modes/Alternative Comparison Table

Transportation Mode	Klondike Alternative	Crescent Junction Alternative	White Mesa Mill Alternative	ECDC Alternative	Cap-In-Place Alternative
Trucking					
Transportation mode considered	Yes	Yes	Yes	Yes	Yes; backfill materials only
New overpass for exiting Moab Site north bound	Yes	Yes	No	Yes	Not applicable
Deceleration/turn lane from highway to disposal site	Yes; Blue Hills Road turnoff	Yes	Yes	Yes	Not applicable
Acceleration lane from disposal site onto highway	Yes	No	Yes	Yes	Not applicable
Deceleration/turn lane from highway to Moab Site	Yes	Yes	Yes	Yes	Yes
Evaluate U.S. Highway 191 four-lane extension	Dead Horse Point to Blue Hills Road	Dead Horse Point to Crescent Junction	No	Dead Horse Point to ECDC	Not applicable
Road improvements	Blue Hills Road	I–70 intersection, Crescent Junction area	No	No	No
Construct haul road	Yes; Blue Hills Road to disposal cell	Yes; I–70 intersection to disposal cell	No	No	Not applicable
Railroad					
Transportation mode considered	Yes	Yes	No; no existing railroad line; cost prohibitive	Yes	Not applicable
Conveyor to new railroad siding near tunnel	Yes	Yes	No	Yes	Not applicable
New spur	Along Blue Hills Road	From Crescent Junction to disposal cell	No	No	Not applicable
Off-road trucking to disposal cell	Yes	Yes	No	Yes	Not applicable
Slurry Line					
Transportation mode considered	Yes	Yes	Yes	Yes	Not applicable
Outlet drying station at disposal cell	Yes	Yes	Yes	Yes	Not applicable
Truck oversize debris	Yes	Yes	Yes	Yes	Not applicable

Vicinity Properties

- UMTRCA authorizes remediation of properties within the "vicinity of a processing site" provided that the properties are contaminated with residual radioactive material from the site
- DOE would expect that Moab may contain fewer vicinity properties than other sites because it was under NRC license and control (i.e., never abandoned)

Vicinity Properties (continued)

- EPA performed gamma surveys in the 1970s identifying 130 properties with anomalous readings
- Once a Record of Decision is complete, DOE will likely begin property surveys of the 130 properties identified by EPA
- DOE will propose a vicinity property program boundary in the Draft EIS

Public Involvement in Moab Project EIS Process

Public Scoping	Comment period ends **February 14, 2003**
Comment period for Draft EIS	45 days beginning in January 2004

Provide comments to DOE–GJO

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